

Defence Academy Of the United Kingdom



IDEA 2003

Cranfield
UNIVERSITY

Major General Robert Baxter CBE



Shrivenham

The Defence Academy

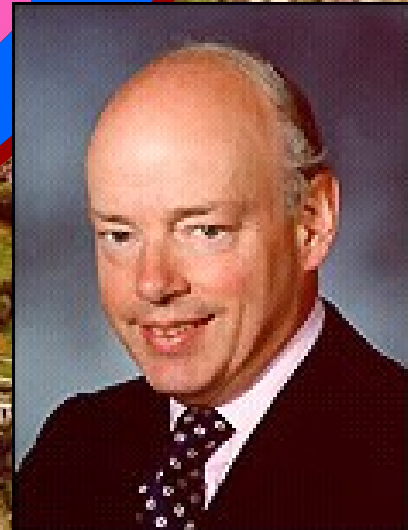
of the United Kingdom

The focus for all defence postgraduate education, training and research in:

- **Operations / Conflict Prevention**
- **Leadership / Management**
- **Science, Engineering and Technology**

The Director of the Defence Academy

Sir Roger Jackling KCB CBE



DEFENCE ACADEMY

Core Business

- The focus for all defence postgraduate education, training and research in:
 - Operations / Conflict Prevention
 - Leadership / Management
 - Science, Engineering and Technology



Shrivenham

The Royal College of Defence Studies
(London)

Joint Services Command and Staff College

Defence Leadership Centre

The Royal Military College of Science

Defence Advisory Team

Defence Technical Undergraduate Scheme

Defence Sixth Form College
(Loughborough)

Research Acquisition Organisation (Sep 03)

Defence Business Learning?

Joint Doctrine and Concepts Centre

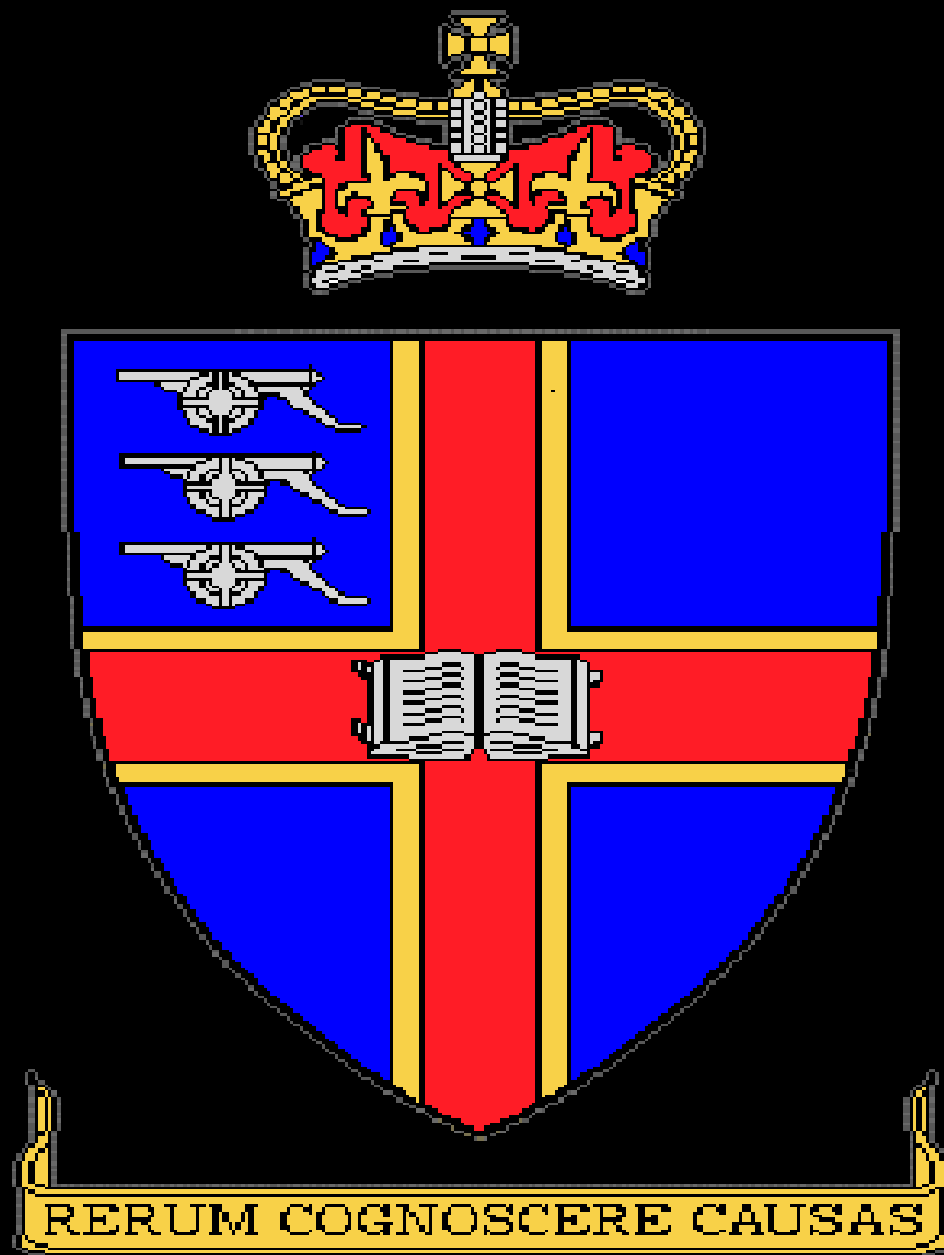


Joint Services Command and Staff College (JSCSC)



Royal College of Defence Studies





The Royal Military College of

What?

- Range of education and training, including 'executive education' – mainly at the postgraduate level - delivered in up to date ways within a defence and security context.
- Research and consultancy.
- Linking defence and security to academia and to the wider public and private sector.

Full Time Courses

[RN, Army, RAF, Civil Svc, Def Industry & Overseas students x
500]

Defence Technology MSc/MA

Medical Ultrasound

Adv

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Explosives Ordnance Engineering

Explosives Ordnance Technology (PG Dip)

Forensic Engineering & Science

Global Security

Global Security (PG Dip)

Gun System Design

Guided Weapons Systems

Distance

Modular

e.learning

Long residential?

Systems

al Research

ulation

chnology

tion

Systems Engineering for

(Defence)

Weapon Effects on Structures

**Weapon Effects on Structures
(PG Dip)**

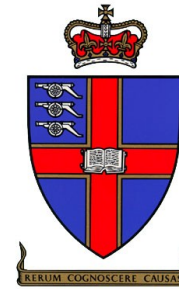
Weapon and Vehicle Systems

**And Higher Degrees by
Research (PhD and
MPhil) x 137**

DELIVERY OF COURSES AT RMCS

Cranfield
UNIVERSITY

**A leading National,
European and International
institution for the
generation, dissemination
and application of
knowledge in Engineering,
Applied Science,
Manufacturing and
Management in the
Industrial and Urban, Rural,
Defence and Public Sectors.**

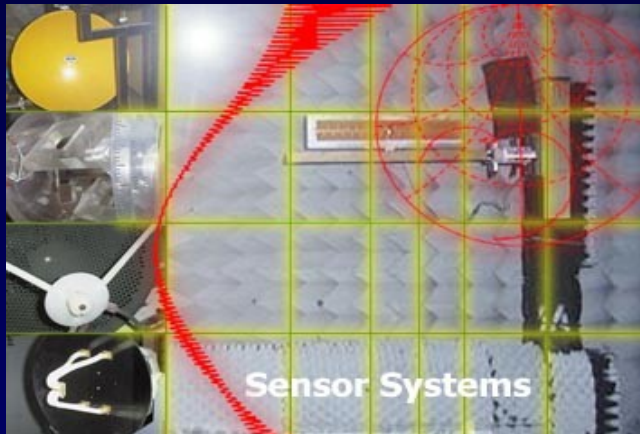


**Military Expertise and
Application to Defence and
Security**

**Academic
Contract
Private
Venture**

Department of Aerospace, Power and Sensors

**Mobile communications
Micro air vehicles
Control and guidance**



Department of Environmental and Ordnance Systems

**Internal and external ballistics
Energetic materials and ordnance
Chemical defence science**

Department of Materials and Medical Sciences

**Composite materials
'Smart' materials
Medical imaging and image processing**



RMCS STUDENT DAYS

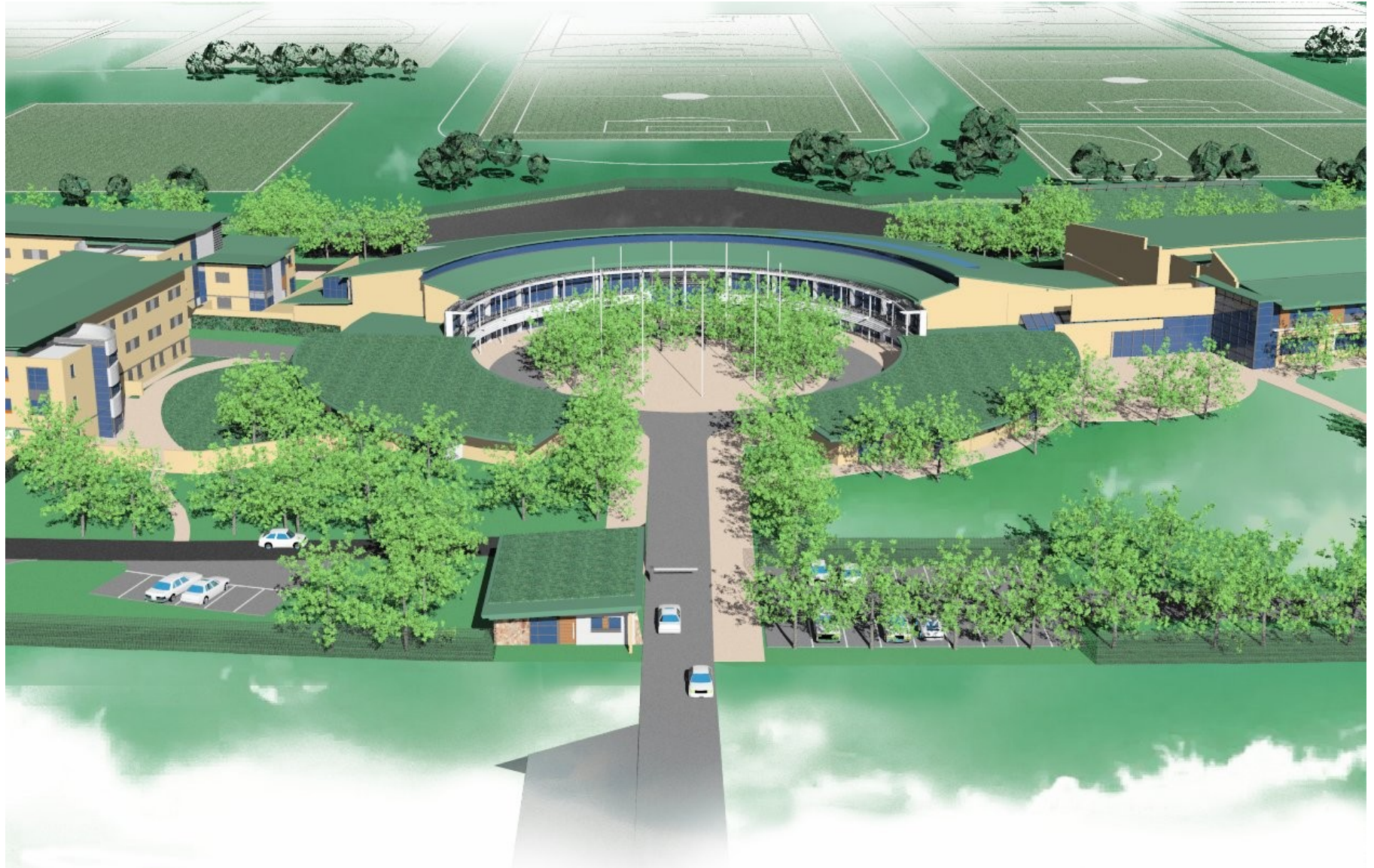
2002/03

Course	MOD/FCO		Cranfield		TOTAL STUDENT DAYS
	Studen ts	Days	Stude nts	Days	
UG	258	51600	223	44600	96200
PG full-time	317	69740	49	10780	80520
PG Exec/PT	106	9980	144	7200	17180
Research/Ph D	18	900	130	6500	7400
RMAS/JCSC	1220	6960			6960
Spec CD short*	1856	13920			13920
*Uses 2001/2 short cse data					
Other short*	582	5820	1218	6090	11910



- **350 Students**
- **All four 'tribes'**

Defence Sixth Form





UOR Support to OP TELIC

Success Story – Comms for Tornado F3

- UOR Endorsed by PJHQ – 9 Dec 02
- Approved by IAB delegate £2M – 20 Dec 02
- Capability delivered (including integration) – 24 Jan 03
- Aircraft now has interoperability for its remaining service (07/08)

Lessons Learnt

- Defence Planning Assumptions do not mention acquisition timelines
- Political decisions will effect industry's ability to provide timely support to future operations
- UOR approval process can be speedy but may be criticised on completion of the conflict.

Pascale Report

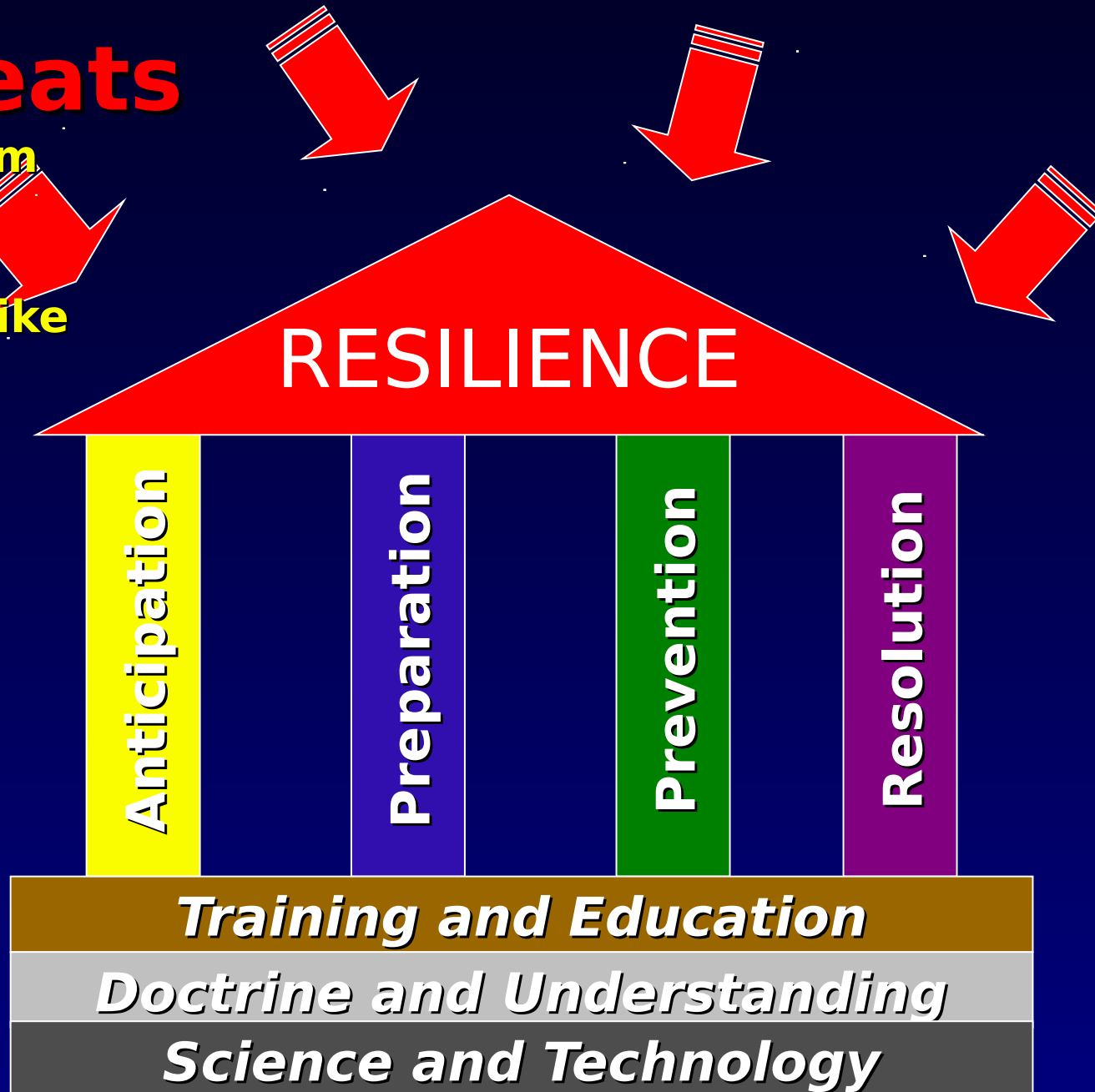
- ‘pattern of underinvestment in training and resocialization of the new cadre’
- ‘organisational learning is an essential capability...’
- ‘Clumsy hand-offs, solutioneering, duplication of effort and territorial conflicts are the unintended consequences of a flawed learning design’

Strategic Drivers

- **Purple as the favourite colour - especially in acquisition.**
- **Smart Acquisition.**
- **Long term contractual arrangements and partnering.**
- **Contractor logistic support plus COGO, GOCO, COCO but less GOGO.**
- **The scientist and technologist move closer to the 'front' line.**
- **Advanced technologies in the commercial sector but 'killing sciences'**
- **Modernising Government and the Defence Change Programme.**

Threats

Terrorism
WMD
SARS
Fuel Strike
Floods





‘ Technology, like art, is a soaring exercise of the human imagination. Art is the aesthetic ordering of experience to express meanings in symbolic terms... Technology is the instrumental ordering of human experience *within a logic of efficient means*, and the direction of nature to use its powers for material gain.’

Daniel Bell, US sociologist and educator

NETWORK ENABLED CAPABILITY

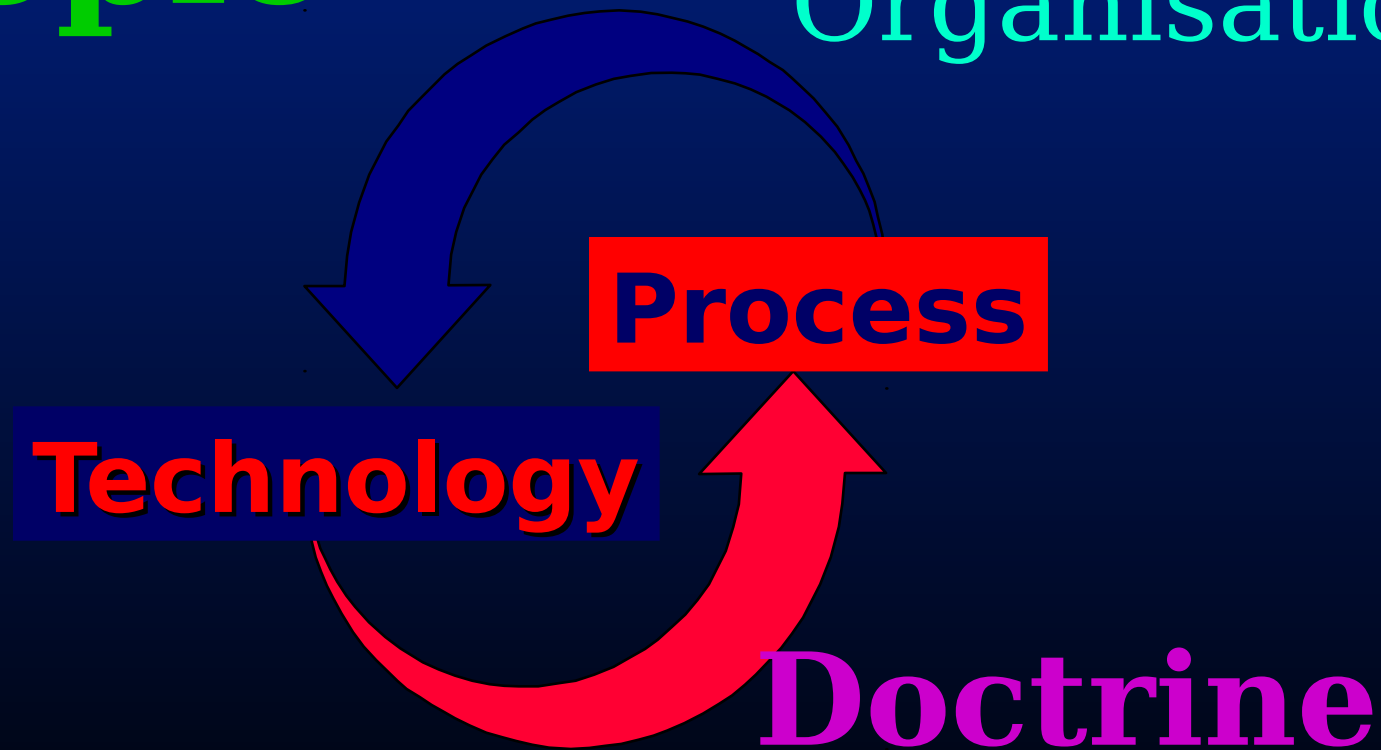
“Linking sensors, decision-makers and weapon systems so that information can be translated into synchronised and overwhelmingly rapid military effect at optimum tempo”

D/CM(IS)2/1 (106/02) dated 29 M

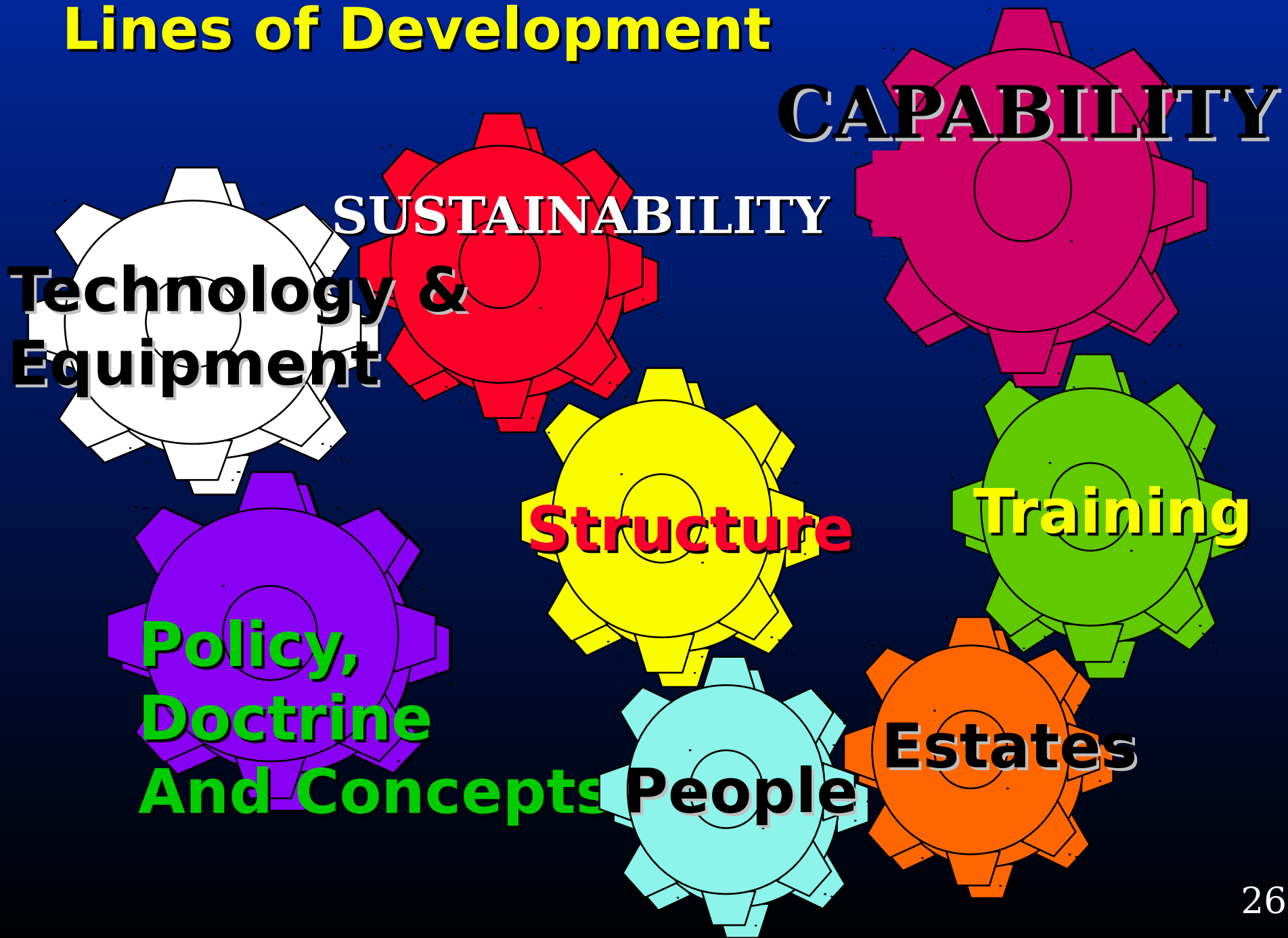
CONTEXT FOR CHANGE

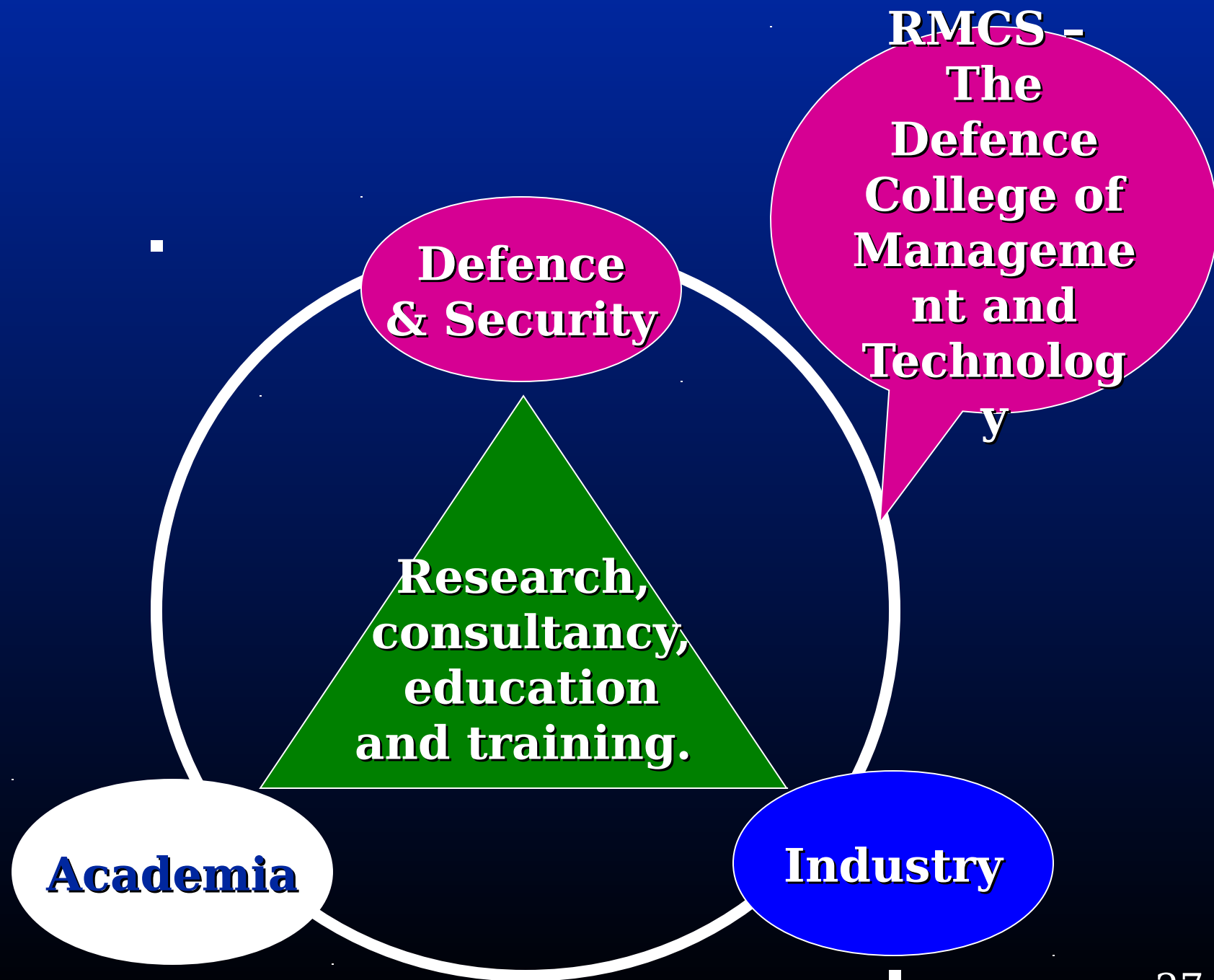
People

Organisation

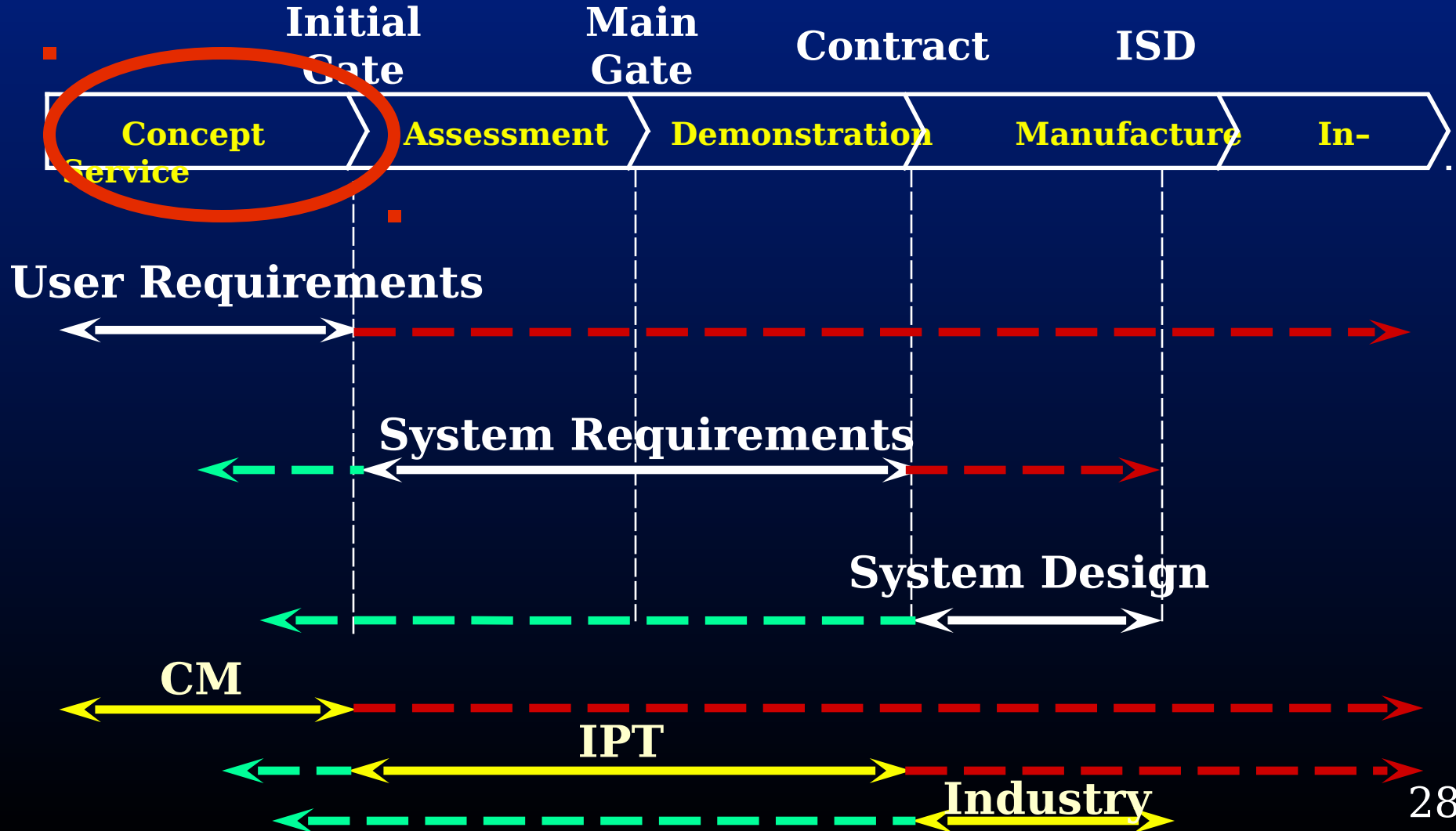


Lines of Development





Smart Acquisition Model



Collaborate

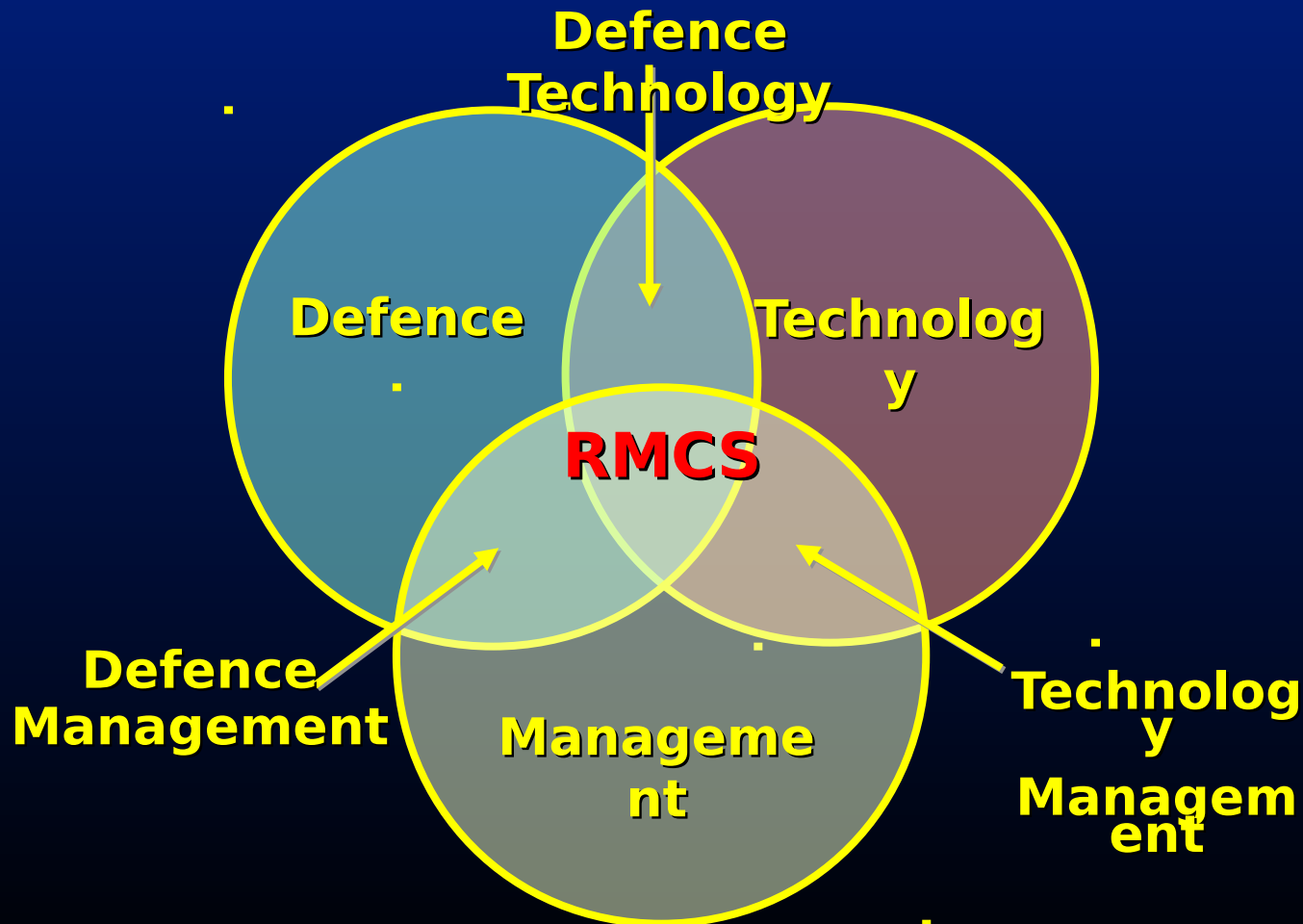
‘work jointly on an activity or project’

***‘cooperate traitorously
with the enemy’***



DEFENCE ACADEMY

Defence, Technology and Management





Cranfield
UNIVERSITY

The Business and Technology School for Defence and Security

The Royal Military College of Science

www.rmcs.cranfield.ac.uk